

May 23, 2002

TO: All Potential Offerors

SUBJECT: Amendment #1 to NREL RFP No. RCI-2-32049 for the "Next Generation Natural Gas Vehicle Phase II: Integration Program"

This amendment is issued to provide a summary of the Pre-proposal Conference Call held on May 21, 2002, providing the list of participants and the questions/answers provided during the call.

A. Industry participants of the Conference Call consisted of the following:

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1	Clean Air Partners, Inc.	John Kelly Dr. John Beck HC Wong	858.332.4852 858.332.4879	jkelly@cleanairpartners.com jbeck@cleanairpartners.com hwong@cleanairpartners.com
2	Ruby Mountain Inc	Jon Lear	801.538-5000	rubymt@aol.com
3	Southwest Research Institute	James Chiu	210.522.2570	jchiu@swri.org
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5	AVL Powertrain Engineering	Stephen Brueckner	734.414.9627	elizabeth.brueckner@avlina.com
6	Paccar Technical Center Peterbilt Motors Co.	Jim Kelley Bill Kahn	360.757.5253 940.566.7796	jim.kelley@paccar.com bill.kahn@paccar.com
7	CumminsWestport, Inc.	Scott Baker Patric Ouellette	916.376.1521 604.718.2079	sbaker@cumminswestport.com pouellette@westport.com
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(cont)	Organization	Contact	Phone	E-mail
11	TransTeq	Paul G. Szilagyi	303 382-1041 x110	paul.s@transteq.com

Questions and answers provided during the conference call are as follows, with the answers in italics:

B. Written Questions

1. On Task 3 – What is the desired number of integrated vehicles to be demonstrated during the fleet testing?

NREL will allow Offerors to propose as many vehicles as are necessary to prove out the technology, but a minimum of two vehicles is required. Both selected vehicles should be of the same configuration so that in the event one vehicle is unable to perform during the entire test, the second vehicle will still be able to provide information for engine and vehicle development and evaluation.

2. On Task 3 – What is the desired number of control vehicles to be compared with the integrated vehicles during the fleet testing?

As above, a minimum of two vehicles is required, both with the same configuration so that in the event one vehicle is unable to perform during the entire test, the second vehicle will still be able to provide comparable, baseline information.

3. On Task 3 – Should the control vehicles be current technology natural gas fueled engines?

The control vehicles shall be advanced technology diesel or gasoline vehicles, depending upon the targeted application, which will allow adequate comparison between the proposed vehicle and the target market.

4. On Task 3 – What information on duty cycle is desired to be collected?

Time and vehicle speed shall be gathered along with engine load information, if possible. This is to determine the typical operation of the vehicle. It may also be used to develop an ad hoc drive cycle by NREL.

5. On Task 3 – At what frequency should duty cycle information be collected?

Duty cycle information should be gathered at 1.5-second intervals for a minimum of 40 hours. This collection should be done during a period in which the vehicle is operating in a typical cycle/fashion.

6. On Task 1 – What units should be used to report Brake Specific Fuel Consumption (BSFC)?

Please use g/kw-hr or lb mass/hp-hr.

7. On Task 1 – Should Brake Specific Fuel Consumption be converted to diesel or gasoline equivalent or thermal efficiency?

Please use thermal efficiency. This, at minimum, shall be done at rated horsepower and torque in order to compare to data available for a comparable diesel or gasoline engine and for the baseline natural gas engine, before modifications. Additional points may be proposed, with reasons.

8. On Task 3 – [P]age 6 of the Statement of Work there is a discrepancy in the required deliverables, compared to those listed on page 4 in the Tasks section (final engine specs). Which requirement should take precedence?

There is no discrepancy between the two sites; Page 4 simply provides more detail than Page 6 regarding data collection. All deliverables as described on Page 4 and Page 6 are required.

C. Conference Call Questions

1. For Task 3, duty cycle information, should load also be included in the data provided?

Load would be helpful and beneficial, if it can be collected relatively easily.

2. In the overview, NREL states that this is Phase II of the NGNGV program. Please explain what was included in Phase I.

Phase I projects were 10-12 month projects to investigate current technologies available to contribute to the overall goals of NGNGV (i.e., advanced engine design and control, aftertreatment, and market analysis), as well as contribute to direction of future work. Details of these projects are available on the NGNGV website at www.ctts.nrel.gov/ngngv.

3. Are any interim results from Phase I available?

There are currently no published results. It is expected that these will be available and presented at the Fall 2002 SAE Truck and Bus Conference.

4. Because Phase I data is not yet available, will this present any issues related to the evaluation of Phase II proposals?

The original concept behind the Phase I work was to assist the NGNGV program in actually selecting the most desirable platform and pathway to the next generation natural gas vehicle. However, because complete data from Phase I is not yet available, the decision was made to leave all options open. Offerors will justify their individual decisions about proposing technologies and vehicle platforms by presenting in their proposal the information they have available. Note that one factor in the qualitative merit criteria (Section 7.2 of the RFP) focuses on this justification for commercial and technical viability.

5. Will there be multiple awards for this RFP?

As stated in Section 4 of the RFP, NREL is anticipating multiple awards from either NREL or SCAQMD.

6. Is there any geographic requirement for the development fleet task? Since SCAQMD is a potential sponsor, do the fleets need to be in California?

*It would be preferred by SCAQMD to have a California fleet selected for the fleet development; however, this is **not** a requirement. Additionally, if an Offeror proposes to use a California fleet, and the identical application is not available, a similar platform with a similar duty cycle in a different location might be acceptable for the on-road development.*

7. Will the West Virginia University (WVU) dynamometer testing be coordinated by NREL or the subcontractor?

NREL will handle scheduling and coordination of the WVU dynamometer testing.

8. Will there be a dynamometer located near the test fleet?

A dynamometer is currently located in southern California, which could be used for testing fleets. Otherwise, NREL may arrange, either to have the dynamometer relocated to the demonstration site, or to have the vehicles transported to the dynamometer.

9. What is the purpose of the WVU dynamometer testing? The test results (emissions in g/mi) don't correlate to the emission requirements/standards in g/bhp-hr.

The WVU dynamometer testing will be used to get some basic on-road performance information, in comparison to a comparable control vehicle. These emissions results will be used to show the real-world emissions benefits of the vehicle being developed. The emission results used to show success in achieving the required emission levels will be achieved using the standard engine testing protocol for certification.

*Please send further questions regarding the WVU dynamometer by e-mail to:
kathee_roque@nrel.gov.*

10. What is the estimated number of days required for WVU dynamometer testing?

In general, the testing of the natural gas vehicle will take approximately 2-3 days, and the diesel control vehicle will also take approximately 2-3 days. In addition, some time may be required to transport vehicles to and from the dynamometer, depending on the location of the test fleet.

11. Would HCNG or Hythane be considered acceptable fuel types under this proposal?

As stated in the RFP, the objectives of the NGNGV program are to promote the development of natural gas engines and vehicles. Therefore, neither HCNG nor Hythane proposals will be considered under this solicitation.

12. Section 10(d) of the RFP specifies a page limit. Are the title page, cover letter, and table of contents included in this page limit?

The cover letter, title page and table of contents do not count toward the page limit. This limit applies to technical proposal text and content.

13. Section 7.5(d) of the RFP states that the Carl Moyer program will be used to evaluate emission benefits. Do you have more information regarding how these calculations will be done?

The California Air Resources Board Web site shows how all assumptions and calculations are done, including showing several examples in their "Final Carl Moyer Program Revised Guidelines approved by the Board on November 16-17, 2000". This Web site is <http://www.arb.ca.gov/msprog/moyer/approved.htm>. NREL will do all these calculations based upon the specific information requested in Section 7.5 of the RFP.

Our appreciation is extended to all who participated in and contributed to the conference call.

Please be reminded that technical and cost proposals are due in original and eleven (11) hard copies only (no fax or e-mail transmittals) **not later than 4:30 p.m. on June 27, 2002**. Also, due to increased security concerns, no hand-delivered packages will be accepted. *Proposal delivery must be made via overnight or postal carrier.*

If you have additional questions, please contact me by e-mail at: kathee_roque@nrel.gov.

Best regards,

[K. Flanagan Roqué] e-sig.

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Cc: Source Evaluation Team